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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/987,380	12/09/1997	MASAO INOUE	Q48500	6198

7590

02/07/2002

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EXAMINER
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WANG, SHENGJUN

ART UNIT	PAPER NUMBER
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1617

DATE MAILED: 02/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicati n No.

08/987,380

Applicant(s)

INOUE ET AL.

Examin r

Shengjun Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7,10,11,13 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,10,11 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

1. The request filed on November 5, 2001 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/987,380 is acceptable and a CPA has been established. An action on the CPA follows.

Applicants' election in the parent application is presumed to carry over to the instant CPA since applicants have not indicated a contrary intention.

Claims 16-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 16.

### ***Claims Rejections 35 U.S.C. - 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 5 -7, 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tocker (WO 91/10362 of record) in view of Burger et al. (Derwent Abstract, Derwent – ACC-No. 1993-067839 of record) and Kogler et al. (US Patent 4,772,490).

Tocker teaches a pesticidal granule composition coated with polyurethane. See, particularly, page 2, line 23-31. The polyols employed has at least two hydroxyl groups and the polyisocyanate has at least one isocyanate substituent (-NCO). See, particularly. Page 4, lines 1-30. The amount of polyisocyanate employed is about 1-20% by weight, and the reaction

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temperature is at ambient temperature or above. The coating procedure can be carried out stepwise. See, particularly, page 5, line 5-22. Tocker further teaches that, as required by some practice, e.g., slow release of the active component, monomers containing more isocyanate or hydroxyl group may be employed to increase the degree of cross-link in polyurethane. See, particularly, page 10, lines 16-24. The polyisocyanate employed therein are, for example, triisocyanato toluene, 1,5-naphthalene diisocyanate, etc. the polyols employed therein are, for example, glycerin, glycol or other polyhydric alcohols. See, particularly, page 4, lines 3-30.

Tocker does not teach expressly the employment of the particular procedure herein for making the coating wherein the polyols and polyisocyanate are mixed before the application to the granules.

However, Burger et al. teach that the particular procedure herein, i.e., mixing the polyol and polyisocyanate before applying them to the granules, is known for coating agrochemical granules for forming multiple layers of polyurethane coating. The coating made by such procedure are known to be physically stable, resistant to frost and provide sustained release of active ingredients. See the abstract. Kogler et al. also teaches method of coating granular agrochemicals with polyurethane for controlled release of active ingredients, wherein polyisocyanate and polyols are premixed. See, particularly, the abstract, examples 2-5 in columns 5 and 6. The coating's properties may be manipulated by using different polyols and different isocyanates. See, particularly, column 2, line 49 bridging column 3, line 29.

Therefore, it would have been prima facie obvious to a person of ordinary skill in the art, at the time the claimed the invention was made, to modify the pesticidal granules of Tocker by mixing the polyols and polyisocyanates first followed by coating the mixture to the granules.

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A person of ordinary skill in the art would have been motivated to make such modification because the modification will lead to a stable, controlled releasing coating.

Regarding claims 5, 7, 10, 11 and 13 which recited water absorption ratio of the polyurethane is not more than 5%, it is noted that the reference and the instant application are employing the essentially the same polyols and polyisocyanates. See, pages 13-14 in the specification and page 4 in Tocker. Therefore, the polyurethane coating of Tocker is reasonably expected to have the same water absorption ratio as claimed herein. Further, the optimization the properties of the coating accordingly by using different isocyanate or polyol is considered within the skill of artisan, as discussed by Tocker et al. (cross link degree) and Kolger et al. (different polyol and isocyanate).

2. Applicant's remarks submitted September 5, 2001 have been fully considered, but are not persuasive for reasons discussed below.

3. Regarding the remarks about pesticide and fertilizer, note both pesticides and fertilizers are well-known agrichemicals, a coating system which render the agrichemicals the desirable properties such as stability in natural environment s, controll release, etc. would have been reasonably expected to be similarly useful for both agent. In fact, Kogler et al. teaches the coating may broadly used for any ingredients that is to be controlled released. See, particularly, the abstract. Regarding the motivation to combine the teaching, as stated in the last office action, coating made by procedure of Burger et al. is known to be stable, resistant to frost and provide sustained release of active ingredient.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shengjun Wang, Ph.D. whose telephone number is (703) 308-4554. The examiner can normally be reached on Monday-Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minna Moezie, J.D., can be reached on (703) 308-4612. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.



Shengjun Wang

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February 2, 2002

